

AUTOMOTIVE
SECTION

FIND TRUCK'S VALUE BY TON MILEAGE

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BY TON-MILEAGE

Careful Record of Haulage
Shows Worth of Motor
Over Horse.

Ton-mileage is one of the things a truck owner ought to know how to compute in order to be able to make proper estimates of truck performance. When he can figure out the ton-mileage of each of his trucks he is in a position to compare the operating costs of the various makes of trucks in his fleet or to compare the cost of truck haulage with horse and wagon delivery.

The method of computing ton-mileage is very simple, says the United States Tire Company. In making the computation it is apparent that two methods of hauling must be considered, one case being where the whole load is carried by the full distance and the other where parts of the load are taken off or put on at various points along the trip.

Two Units of Measurement.
Just as there are two units of measurement, there are two units of measurement. For the load that is carried

the full distance there is the measurement known as the absolute ton-mile, and for the load that is dropped piecemeal in the truck's journey there is the commercial ton-mile.

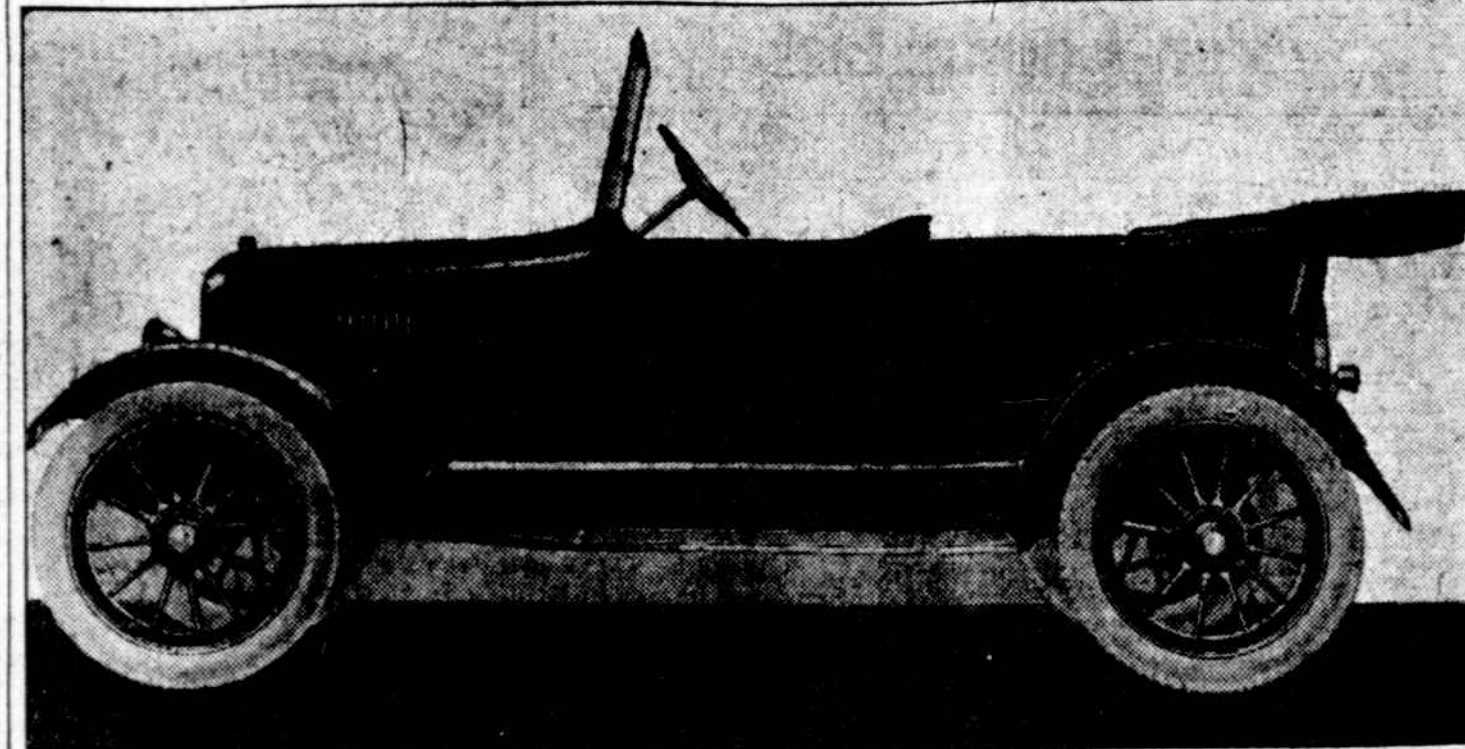
The absolute ton-mile is a ton carried one mile. If a truck carries four tons one mile the ton-mileage is four, or if one ton goes four miles the ton-mileage is four. Four tons carried four miles makes sixteen ton miles. This method of computation is so simple that the truck owner can readily work out his ton-mileage on trucks that leave the whole load at the end of the trip.

But for the trucks that make partial deliveries the commercial ton-mile has been adopted as the unit of measurement. As most trucks operate under this plan this is the unit which will be employed in most cases. In order to obviate the necessity of weighing the goods taken off at each delivery a simple rule of averages has been devised which gives the ton-miles with sufficient exactness for the purposes required.

Take Average Tons.
The first step in arriving at the ton-miles on such a trip is to compute the average tons. This is found by dividing the number of tons hauled by the number of deliveries. If a truck carrying four tons made five deliveries, the average tons for the trip would be four-fifths. This result multiplied by the total mileage for the trip gives the ton miles for the trip. For instance, if the truck in question traveled twenty miles, the ton-miles would be twenty times four-fifths, or sixteen.

There are some truck operators whose cargoes are entirely of one article—such as barrels, cases, bundles or kegs—and for these the ton-mile unit would not be so serviceable as a single unit of the goods they carry. For these the same measure of haulage may be effected by substituting for the ton the unit best suited to measure their delivery system.

The New Overland Four



This is the car that was surrounded with so much mystery before it was announced to the public. It is handled by the Harper-Overland people, 1128-1130 Connecticut avenue northwest.

MANY CAR MAKERS
INSTALL HEATERS

Patrons Insist on Solid Comfort
In Fall and Winter
Months.

One of the outstanding features of motor car production this season is the trend toward car heaters. Twenty motor car manufacturers are equipping all or part of their line of closed cars with car heaters.

This may be regarded as an indication that before long a heater will be considered as a necessary part of standard equipment to the same extent as a starter.

Comfort being one of the principal features of owner interest car heaters are certain to have a strong appeal to car owners and influence their decision in purchasing a car.

Closed cars particularly have always been sold on the basis of comfort and all-year use. Inasmuch as warmth is essential to comfort in fall and winter, the argument is advanced that a non-heated automobile is very much like a house without a furnace and dependent only on its walls and roof for protection.

All Rear Benefits.
Nor is the car owner the only one to gain by increased use of motor car heaters. Automobile manufacturer and dealer alike reap benefits.

Starting with mid-winter or earlier, manufacturers and dealers are obliged to store cars in order to be in position to take care of the spring demand. This is a decided hardship on all concerned, and has ever been a handicap to production and sales.

An enormous amount of capital is tied up for a considerable period, not to mention the item of storage charges, an item of no mean proportion in itself.

While the above statement regarding storages applies particularly to open cars, this type of body is well within the influence of car heaters. Two manufacturers who for the past two years have used heaters on their closed cars, have gone a step farther this season and are equipping their complete line, including all open body models, with car heaters. Garages and accessory dealers also report a

demand for car heaters from open car owners.

Viewed from this angle, the car heater will do much toward solving the winter storage problem for manufacturer and dealer. This season there is a big shortage in closed car production, and it is a serious matter for dealers who have an abundance of closed car prospects and an alarming scarcity of closed cars to sell.

Worthy Substitutes.
Dealers unable to take care of their closed car prospects in many cases may be able to induce the prospect to accept a touring car equipped with well fitting curtains and a heater as a worthy substitute to meet the situation.

There is also a vast number of motor car buyers who cannot afford to pay the additional price of a closed car, and who require all-year use of their car. In this case, also, car heaters have an unusually strong appeal.

It seems but a logical step to carry the car heater to the truck field. Drivers of delivery cars and trucks are obliged to be out in all kinds of weather, and it is only natural that their personal comfort should affect their efficiency. One manufacturer of motor trucks is now equipping his cab bodies with well fitting side curtains and installs as standard equipment a compact and efficient heater, using the exhaust gas from the motor.

From a variety of viewpoints, it appears that car heaters are destined to become a decided factor in the automobile field and their universal use is but a matter of a short time.

RIGHT KIND OF TRUCK
CUTS TRANSPORT COST

"It will more than pay every concern employing motor trucks to make doubly sure that its truck equipment fits local transportation problems and is fully equal to meet all transportation demands," says W. L. Kissel, secretary and treasurer of the Kissel Motor Car Company.

"When he has the right sized and kind of motor trucks, the owner is securing the very lowest cost per ton mile for delivering or hauling his goods or materials. But when he has the wrong kind of truck equipment his cost of transporting goods or material is greater and the difference between this overcost and what he would pay if his equipment fitted his demands, represents an unnecessary loss."

LOCK YOUR SPARE TIRES

NATIONAL ROADS
NEEDED IN WEST

Concentration of Government funds on roads of national importance, and adequate provisions for their maintenance, is a development which is sorely needed in the Western country, according to T. J. Ehrhart, State highway commissioner of Colorado.

So acute has the situation become under the operation of the present Federal aid act that it is Mr. Ehrhart's opinion that a continuance of the present policy will find Colorado State highways rapidly deteriorating from enforced neglect, with here and there detached stretches of well improved roads, which will exaggerate the condition of the many miles of highways poorly maintained.

"The Federal aid program in 1919-20 in Colorado, includes 117 projects," said Mr. Ehrhart. "These have a total mileage of 882, and total cost estimates of \$5,425,000, 50 per cent of which will be required from State funds, which will absorb every available dollar. There are approximately 8,000 miles of State highways, and deducting the mileage to be improved under Federal aid, there will remain 7,117 miles of State roads without financial provision for construction or proper maintenance."

Tourist Traffic.
"Growing tourist or truck traffic is hammering away at our highways, making it absolutely necessary that we have constant and continuous maintenance. The situation is fast becoming an impossible one and it cannot find relief in an increase in Federal Aid Funds, unless there is a distinct revision in Federal policy, and the States be permitted to construct longer sections of road not used for the carriage of mails."

"A study of the situation has convinced me that the first step which should be taken is the construction of a national highway system by the National Government. The Government should then protect this system by maintaining it. This would release our State funds and permit us to undertake construction and maintenance of State highways. If the Government should decide to give us aid in this, too, so much the better, but some relief must be granted from the present law. The Western country is too sparsely settled and valuations too low to permit of a continued increase in funds for construction only."

Through Roads Needed.
"The great need of the West today is through roads which will withstand a heavy traffic. We can't raise funds for them by taking the visitors who use them most, because to do so would be to check travel, and travel is one of the most important assets which the West has. But national expenditure on main roads would equalize the

burden and at the same time would open up the Western country with surprising rapidity.

"There are some, of course, who would rather see State highway departments in full charge. I disagree with this viewpoint. The need is roads; the method of operation is secondary. The people of our country are not going to ask whether it is the State or the National department which is building them, as long as they get results."

"The problem is so large, so vital, that it cannot be handled by any one group. There is enough work for all of us."

"The Colorado commission is in favor of legislation such as that contained in the Townsend bill, which provides for a National system and a Federal commission, and it is our hope that Congress will see fit to act favorably upon this measure."

"WHO?"
Who rescues you when in distress?
Who spots the trouble quick?
Whose keen perception saves the day?
Who turns the clever trick?
Who gruffly gives encouragement?
Who scorns to camouflage?
When, desperate, you bite the dust?
The man from the garage!

Whom do you cuss when things go wrong?
Whom bless, when things go right?
Who gets the odium and praise?
Who hates the man who's "right"?
Who, speaking of his bill, resorts?
To airy perisage?
Who makes us draw big sighs—and checks—
The man from the garage.

LOCK YOUR CAR
LOCK YOUR SPARE TIRES

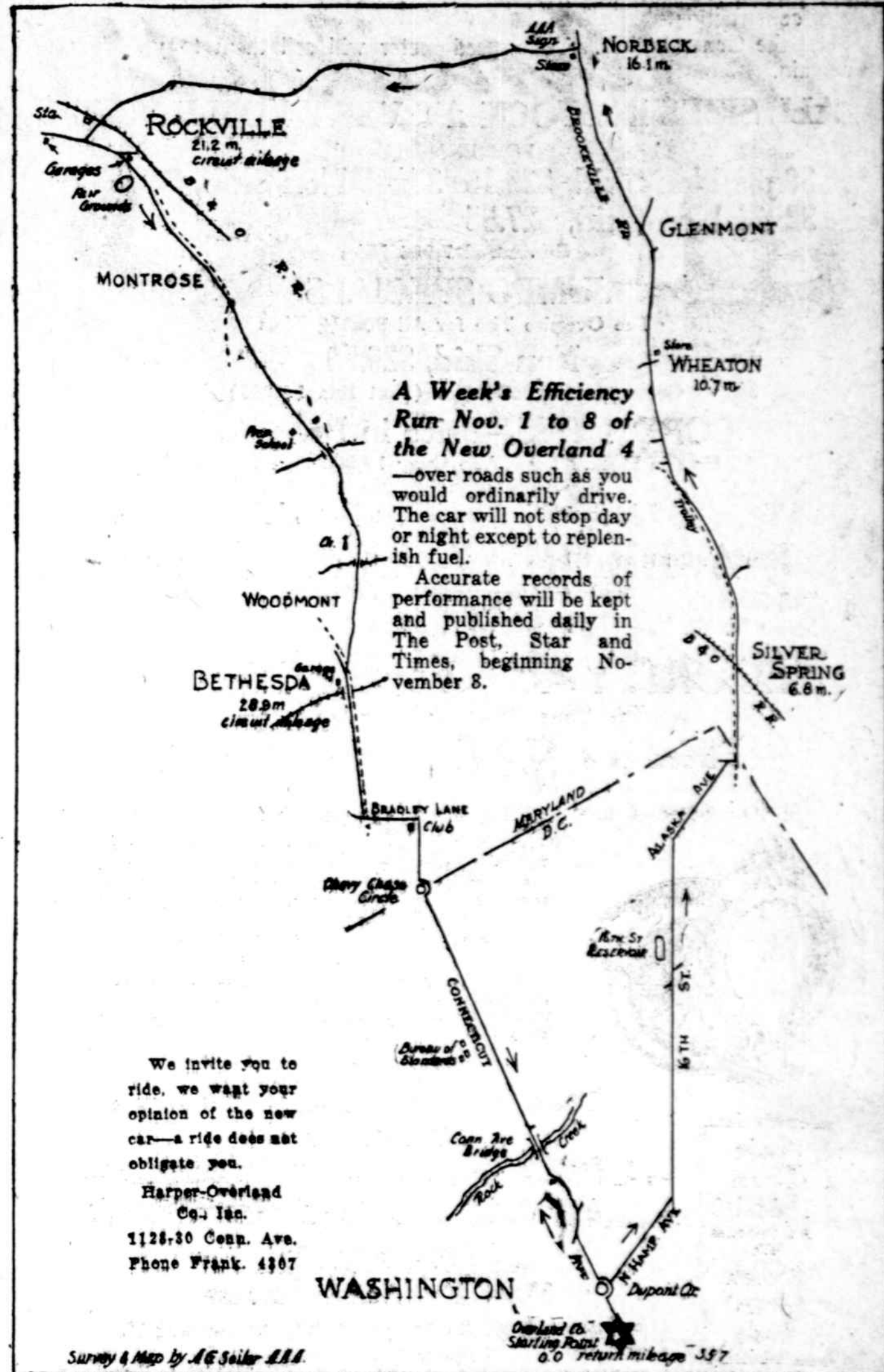
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America's most critical buyers are gradually substituting Master Trucks for other makes because of Master super-desirability. Practically every buyer who really investigates with thoroughness and carefulness, from a scientific standpoint, prefers the Master. Accurate standards of comparison show values in their true light.

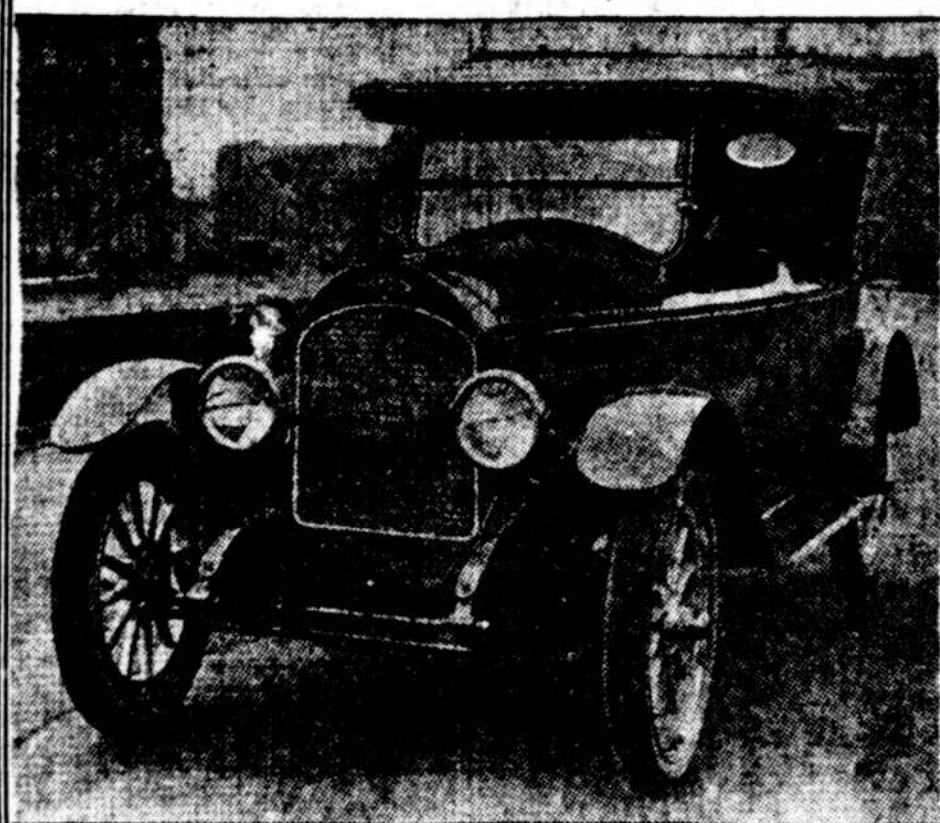
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